

EXHIBIT C

Expert Report of Anthony E. Fairfax on
Racial Gerrymandering Analysis of the
Jefferson County, AL Commissioner Districts

March 15, 2024

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I. Introduction

1. I have been retained by counsel representing the plaintiffs in this lawsuit to analyze the differences in the previously enacted redistricting plan (“Pre 2020 Plan”) and the 2021 Adopted redistricting plan (“Adopted 2021 Plan”) for the Jefferson County, AL Commissioners, and determine whether race predominated in the construction of the Adopted 2021 Plan. I was also asked to produce an Illustrative Plan that minimized the municipality splits and adhered to the Jefferson County, AL Commissioner District redistricting criteria.

II. Qualifications

2. I received a Bachelor of Science degree in Electrical Engineering (BSEE) from Virginia Tech in 1982 and a Master of Geospatial Information Science and Technology (MGIST) degree from North Carolina State University in 2016.
3. Currently, I am a demographic and mapping consultant and the CEO/Principal Consultant of CensusChannel LLC. As a consultant working on redistricting issues over the last thirty years, I have developed nearly one thousand redistricting plans during the last four decennial redistricting cycles. I have drawn redistricting plans for jurisdictions of all sizes, from statewide plans to plans for small municipalities. In the course of my career, I have also had the opportunity to draw and analyze many plans for jurisdictions within multiple states throughout the country. In addition, during that timeframe, I provided consulting services for numerous non-profit and public-sector groups focusing on redistricting plan development, analysis, and training.

4. Throughout the redistricting cycles, I have provided services and/or training for several notable national and regional organizations, including: the American Civil Liberties Union (ACLU), Campaign Legal Center (CLC), Congressional Black Caucus Institute (CBC Institute), Louisiana Legislative Black Caucus (LLBC), NAACP, NAACP Legal Defense Fund (NAACP LDF), Power Coalition for Equity and Justice, Southern Coalition for Social Justice (SCSJ), and Southern Echo.
5. Recently, I was hired by the NAACP LDF to develop an illustrative redistricting plan for the *Robinson v. Ardoin*, No. 3:22-cv-00211 (M.D. La.) court case. The illustrative plan included two majority-Black congressional districts rather than one that was included in the state legislature's approved plan. The illustrative plan, report, and testimony provided evidence of the first precondition in *Gingles* in proving the dilution of Black voting strength in violation of Section 2 of the VRA. The effort included plan development, expert report, rebuttal report, and testimony.
6. In 2021, I was hired by the ACLU to develop an illustrative redistricting plan in *Arkansas State Conference NAACP v. Arkansas Board of Apportionment*, No. 4:21-cv-01239 (E.D. Ark.). The illustrative plan included five additional majority-Black House districts beyond those in the Board of Apportionment plan. The plan, report, and testimony provided evidence of the first precondition in *Gingles* in proving the dilution of Black voting strength in violation of Section 2 of the VRA. The overall effort included plan development, expert report, rebuttal report, and testimony.

7. Prior to this round of redistricting, I was hired by the CLC to develop illustrative redistricting plans, associated expert reports, depositions, and provide testimony in *Holloway v. City of Virginia Beach*, No. 2:18-cv-00069 (E.D. Va.). The Illustrative plans included two majority Latino¹, Black, and Asian (LBA) combined coalition districts to provide evidence of the first precondition in *Gingles* for the city of Virginia Beach, VA. Ultimately, for the remedial phase, I developed a plan which included three majority Latino, Black, and Asian coalition districts for the city of Virginia Beach, VA.
8. Also, prior to the 2020 redistricting cycle, I was hired by the City of Everett, Washington, to perform the duties of Districting Master. I was tasked with assisting the city's Redistricting Commission with developing its first districting plan. The city moved from a seven-member at-large voting system to five single-member districts and two members elected at-large. As Districting Master, I shepherded the commission through the entire plan development process as they successfully developed the city's districting system.
9. In addition to the above noted litigation in Arkansas, Louisiana, and Virginia, I have testified, or provided depositions as a redistricting expert in Alabama, North Carolina, and Texas. I provided testimony with a focus on demographic and mapping analysis in federal and state court cases. This included: *Alabama Democratic Conference (ADC)*, *Covington v. North Carolina* (North Carolina), *NC NAACP v. State of North Carolina* (North Carolina), *Wright v. North Carolina* (North Carolina) *Perez v. Perry* (Texas), and *Perez v. Abbott* (Texas).

¹ The terms "Hispanic" or "Latino" may be used interchangeably throughout this report.

10. My redistricting and geographic information system (GIS) experience and detailed work as an expert are contained within my attached resume (See Appendix A). I am being compensated at a rate of \$180 per hour for my work on this case.

III. Software, Data, and Technical Process Utilized

11. The software utilized during the analysis was Maptitude for Redistricting (“Maptitude”) by Caliper Corporation. Maptitude for Redistricting is one of the leading redistricting software applications utilized by consultants, major non-profit groups, and governmental entities.² The company provides data from the Census 2020 (“PL94-171”) and map data for Jefferson County, AL, which were utilized during the analysis process.
12. ESRI’s³ ArcGIS’s ArcMap application was used to generate county, district, and other zoom maps for the Pre 2020, Adopted 2021, and Illustrative Plans.
13. Several datasets were acquired and utilized during this effort:
- a) The 2010 and 2020 census data for the total population were obtained from Caliper Corporation’s datasets for Jefferson County, AL.⁴
 - b) The ESRI shapefiles for Pre 2020, Adopted 2021 Plans, 2020 Precincts and 2023 Precincts were provided by counsel for the plaintiffs.

² See <https://www.caliper.com/mtrnews/clients.htm> for Maptitude for Redistricting’s client list.

³ ESRI, the creator of the “shapefile,” is one of the leading GIS corporations in the world.

⁴ Caliper Corporation provides 2020 Census Data (PL94-171 data) in a format readable for their software, Maptitude for Redistricting. The population data are identical to the data provided by the Census Bureau.

- c) I also downloaded the most recent race/ethnicity citizenship data from the Redistricting Data Hub.⁵ This included the 2021 5-Year American Community Survey (“ACS”) Citizen Voting Age Population (“CVAP”) dataset at the block group level for Jefferson County, AL.⁶

14. In order to review the CVAP data at various geographic levels for the Pre 2020 and Adopted 2021 Plans, I utilized Maptitude for Redistricting’s disaggregation/aggregation process.⁷ The disaggregation/aggregation process is an accepted industry process when evaluating citizenship data or other data that are not provided at the census block or other levels. Once the disaggregation/aggregation process was completed, estimated CVAP data were available for review at the block level (as well as other Census levels).

IV. Summary of Opinions

15. A summary of my conclusions and opinions includes the following:

- a) The shifting of population from the Pre 2020 to the Adopted 2021 Plans is primarily due to race predominating during plan development. The shifting and segmenting of population

⁵ The Redistricting Data Hub is a non-partisan project of the Fair Representation in Redistricting Initiative and operates as an independent and autonomous project, overseen by the Fair Representation in Redistricting advisory committee. It aggregates various Census data into a readily available format for download through a central website. See <https://www.redistrictingdatahub.org>.

⁶ See <https://www.census.gov/programs-surveys/decennial-census/about/voting-rights/cvap.html>

⁷ Disaggregation apportions a population to a lower geographic area from a higher geographic area using a percentage of a matching population field at both geographic levels. In this instance, voting age population was used as the weighted variable to apportion amounts to census blocks. Aggregation sums up the lower-level results to all other higher geographic levels to be used. Maptitude also includes a pure geographic disaggregation/aggregation process based on area size, an approach not appropriate to this analysis.

by race concentrates Black population in order to maintain two districts with significant Black population (Districts 1 & 2) and three districts with significant White population (Districts 3, 4, and 5).

- b) District 1, with greater than 78% Black under the Adopted 2021 Plan, is kept approximately the same or higher percentages than the Pre 2020 Plan by adding significantly more Black population than White population. Meanwhile, Districts 3 and 4 with populations greater than 30% Black in the Pre 2020 Plan, saw a decrease in Black percentage and an increase in White percentage under the Adopted 2021 Plan.
- c) District 2, in the Adopted 2021 Plan appears to have been kept above 65% Black⁸ by the shifting of an almost equal amount of Black and White population to the district. Finally, District 5 (as well as Districts 3 and 4), with the lowest Black percentage, saw an increase in White percentage from the Pre 2020 to Adopted 2021 Plan.
- d) Based on the unnecessary addition and packing of the Black population for District 1, the minimization of the decrease in Black percentage of District 2, the clear pattern of decreasing Black percentage and increasing White percentage in Districts 3, 4, and 5, the fact that a reasonably configured Illustrative Plan performs similarly or better with traditional redistricting criteria than the Adopted 2021 Map, and the fact that none of this movement was necessary to correct the population deviation under the Pre 2020 Plan, I

The percentage of 65% was once viewed by the courts as necessary to allow the minority group to elect candidates of choice. See <https://doi.org/10.1111/j.1467-9930.1988.tb00004.x>

conclude that race played a predominant role in the configuration of the Adopted 2021 Plan.

V. Methodology

16. In order to determine whether race predominated during the plan development process, it was necessary to review and analyze the racial population changes that occurred from the Pre 2020 Plan to the Adopted 2021 Plan.⁹ The analysis I performed included a plan-wide comparison and a district-to-district comparison. The overall methods that I used are presented below.

17. I also obtained the relevant data to recreate the Pre 2020 and Adopted 2021 Plans for the commissioner districts for Jefferson County, AL. The plans were reconstructed using the Maptitude application and the shapefiles that counsel provided me.

18. The analysis included a focus on the County's largest race/ethnicity (racial) groups—White Not Hispanic or Latino Alone¹⁰ (“White”) and “Any Part”¹¹ Black or African American (“Black”)—using the 2020 decennial census. Populations were analyzed by reviewing the total population, voting age population (“VAP”), and Citizen Voting Age Population (“CVAP”) for the County.¹²

⁹<https://www.democracydocket.com/analysis/racial-gerrymandering-vs-racial-vote-dilution-explained/#:~:text=First%2C%20a%20plaintiff%20must%20show,preserving%20compactness%20of%20districts%2C%20maintaining>

¹⁰ “Alone” denotes persons who selected a single race.

¹¹ “Any Part” Black includes all surveyed person who selected Black or African American including mixed race and Black Hispanic or Latino persons.

¹² Citizen voting age population includes persons who are citizens above the age of 18 years. CVAP data is typically provided by the American Community Survey.

19. The White population consists of those who selected White but did not select Hispanic or Latino on the decennial survey. The Black population consisted of persons who selected Black or African American single race or in combination with other racial groups on the decennial survey. The Black population also contains the Black persons who selected Hispanic or Latino. The Hispanic or Latino population consists of all persons who, regardless of any race selected on the census survey, identified as Hispanic or Latino. Thus, there exists a small overlapping of Black Hispanic or Latino population if the race/ethnicity groups are summed together.¹³
20. The Adopted 2021 Plan's shapefile was utilized to determine the district boundaries of the commissioners that were enacted in 2021. The Pre 2020 Plan was used in the same manner to determine the commissioner districts for the boundaries in place from the 2010 round of redistricting to 2020. I used 2020 Census data with the district boundaries for both Adopted 2021 and Pre 2020 Plans.
21. Census Voting Districts (VTDs) were used in the analysis and the central building block for the Illustrative Plan. VTDs are for the most part, approximate geographic areas of local precincts. In this instance, the 2020 Precincts were available at the time of the development of the Adopted 2021 Plan and in general followed VTD boundaries.

¹³ There is also an overlapping when calculating the "other" category using White, Black, and Latino.

22. However, even if VTDs do not exactly coincide with the 2020 Precincts, VTDs have the advantage of always following census geography and blocks.¹⁴ In addition, I visually observed that VTDs generally followed 2020 precincts with the exception of a few areas.
23. Thus, when analyzing split VTDs, a few of the VTDs were split with populations less than 100 persons. These may be the difference between VTDs and the 2020 precinct geography or misalignment of the precinct shapefile.¹⁵ This difference did not impact my analysis or conclusions.¹⁶
24. Maptitude for Redistricting Core Constituencies reports provided the primary data for the overall district population analysis. The Core Constituencies reports compare two plans and show how much of the population in each district is retained and how much of the population in each district comes from another district's population. In addition to the total population, Black and White population was also presented in the reports.
25. The Core Constituencies reports were used to determine the population shift from the Pre 2020 Plan to the Adopted 2021 Plan. Maptitude for Redistricting also offers a feature that enables the export of the report to a Microsoft Excel spreadsheet format.
26. Core Constituencies reports were generated in pdf format (*See* Appendix E), as well as Microsoft Excel format. Using Maptitude the Adopted 2021 Plan was opened, and the Pre 2020

¹⁴ Consequently, race and population data from the 2020 Census data can be used to determine the population and racial makeup of the districts. Since, the 2020 precincts do not always follow census geography, determining population in each precinct becomes unclear.

¹⁵ It is possible that the County GIS system produced shapefiles that differed slightly from the Census VTD geography. This may also cause split VTDs. Nonetheless, this did not impact my analysis or conclusions.

¹⁶ It is important to note that the VTD splitting that occurred in the Adopted 2021 Plan is only part of an overall pattern of race guiding the development of the plan.

Plan was selected as the base to compare the population changes. Total population, White and Black were selected as the population fields.

27. Once the Excel report was generated, two modifications were made to the reports. One, the percentage for the three racial groups was modified to reflect the percentage of the district's total population added. In addition, extra row fields were created to determine the population "added" to each district, the population "removed" from each district, and the resultant population "change" in each district from the Pre 2020 to Adopted 2021 Plans.
28. Each of these reports provided the total, White and Black population that was added to and removed from each district, as well as the resulting change for each district. These amounts were determined for the total population of White and Black persons. Using the core constituencies reports, I was able to determine the total, Black, and White racial makeup of the population that was added to and from each district.
29. In addition to the Core Constituencies report data, block equivalency files were used to generate the geographic areas within the districts that were added or removed. The block equivalency files for the Pre 2020 and Adopted 2021 Plans were joined with census block geographic files. Using this configuration with Maptitude, new geographic areas were merged, and their respective populations were aggregated to depict the map areas added or removed. These new areas were mapped along with their respective population totals. Using these new geographic areas, I was able to determine the makeup of the Black and White population of each split area and the district from which they were moved.

30. Data tables, bar charts and additional thematic maps depicting the population change were created to provide visual context. The charts and maps provide additional visual evidence of district population changes.
31. Finally, the redistricting criteria used to develop the Illustrative Plans centered on 1) equally populating the districts (within plus or minus 1%),¹⁷ 2) ensuring contiguity, and 3) minimizing municipality splits. In addition, maintaining existing district boundaries and generating reasonably compact districts were also considered. Finally, whole VTDs were selected with the exception of achieving population equality and whole municipality objectives.

VI. Demographic Profile of the County of Jefferson, AL

A. Jefferson County, AL – Total Population

32. According to the decennial censuses of 2010 and 2020, Jefferson County total population grew from 658,466 to 674,721 persons—an increase of 16,255 or 2.47%—between 2010 and 2020. (See Table 1).
33. This population increase came primarily from the growth of Black and Latino populations. During this time, the Black population grew by 9,432 persons, from 280,083 in 2010 to 289,515 in 2020, slightly increasing the Black percentage of Jefferson County’s population from 42.54% to 42.91%. The Latino population also grew from 25,488 to 34,856, increasing the Latino percentage of Jefferson County’s population from 3.87% to 5.17%.

¹⁷ The acceptable overall population deviation of 10% for local jurisdictions was reaffirmed in the Supreme Court case of *Evenwel v. Abbott*, 136 S. Ct. 1120 (2016).

34. During this same period, the White population decreased from 340,213 persons in 2010 to 324,252 persons in 2020. The White percentage of Jefferson County's total population also decreased, from 51.67% to under a majority with 48.06% (See Table 1).

Table 1 – Population by Race/Ethnicity (2010 - 2020) for Jefferson County, AL

Race/Ethnicity	2010		2020		Inc/Dec	
	#	%	#	%	#	%
Total	658,466	100.00%	674,721	100.00%	16,255	2.47%
Black	280,083	42.54%	289,515	42.91%	9,432	0.37%
Latino	25,488	3.87%	34,856	5.17%	9,368	1.30%
White	340,213	51.67%	324,252	48.06%	-15,961	-3.61%
Amer Ind	1,431	0.22%	1,207	0.18%	-224	-0.04%
Asian	9,085	1.38%	13,043	1.93%	3,958	0.55%
Pac Islnd	154	0.02%	311	0.05%	157	0.02%
Other	531	0.08%	1,966	0.29%	1,435	0.21%

Note: Excluding Black, race categories are Not Hispanic Alone (Single Race). The Black population is "any part" Black, which is an aggregation of all Black combined race categories, including Hispanic or Latino Black. Latino is Hispanic or Latino of all races. Rounding errors may exist in the table.

*The increase in total population from 2010 to 2020

Source: U.S. Census Bureau PL94-171 data for 2010 & 2020; Aggregations of 2010 or 2020 Census Blocks within the commissioner boundaries

B. Jefferson County, AL – Voting Age Population

35. According to the decennial censuses of 2010 and 2020, Jefferson County's voting age population ("VAP") grew from 503,938 to 527,087 persons - an increase of 23,149 or 4.59% - between 2010 and 2020 (See Table 2).

36. The Black VAP ("BVAP") increased marginally by 16,124 persons from 202,381 to 218,505 persons (40.16% to 41.46%), while the White voting age population ("WVAP") decreased from 274,788 to 265,750 (54.53% to a slight majority of 50.42%). In addition, the Latino VAP

(“LVAP”) increased 5,523 persons or 17,090 to 22,613 persons in 2020, and the total Latino VAP increased by 0.90% from 3.39% in 2010 to 4.29% in 2020 (*See* Table 2).

Table 2 – VAP by Race/Ethnicity (2010 - 2020) for Jefferson County, AL

Race/Ethnicity	2010		2020		Inc/Dec*	
	#	%	#	%	#	%
Total	503,938	100.00%	527,087	100.00%	23,149	4.59%
Black	202,381	40.16%	218,505	41.46%	16,124	1.30%
Latino	17,090	3.39%	22,613	4.29%	5,523	0.90%
White	274,788	54.53%	265,750	50.42%	-9,038	-4.11%
Amer Ind	1,134	0.23%	975	0.18%	-159	-0.04%
Asian	6,994	1.39%	10,409	1.97%	3,415	0.59%
Pac Islnd	119	0.02%	210	0.04%	91	0.02%
Other	270	0.05%	1,298	0.25%	1,028	0.19%

Note: Excluding Black, race categories are Not Hispanic Alone (Single Race). The Black population is "any part" Black, which is an aggregation of all Black combined race categories, including Hispanic or Latino Black. Latino is Hispanic or Latino of all races. Rounding errors may exist in the table.

*The increase in total population from 2010 to 2020

Source: U.S. Census Bureau PL94-171 data for 2010 & 2020; Aggregations of 2010 or 2020 Census Blocks within the commissioner boundaries

C. Jefferson County, AL – Citizen Voting Age Population

37. Reviewing the 2021 5-Year ACS data shows that as of 2021, the Black CVAP (“BCVAP”) was 218,536 or 43.39%, the White CVAP (“WCVAP”) was 267,468 or 53.11%, and the Latino CVAP (“LCVAP”) was 7,514 persons or 1.49% of the total CVAP (*See* Table 3).

Table 3 – CVAP by Race/Ethnicity (2021 5-Year ACS) for Jefferson County, AL

Race/Ethnicity	2021 5-Yr ACS	
	#	%
Total CVAP	503,620	100.00%
Black CVAP	218,536	43.39%
Latino CVAP	7,514	1.49%
White CVAP	267,468	53.11%
Am Ind CVAP	3,362	0.67%
Asian CVAP	6,561	1.30%
Pac Islnd CVAP	89	0.02%

Note: Race categories are Not Hispanic Alone (Single Race). Latino is Hispanic or Latino of all races. All data are county-level 2021 5-Year ACS aggregated block-level data using Maptitude. Slight differences exist between county level 2021 5-Year ACS data and aggregated data.

Source: U.S. Census Bureau 2021 5-Year ACS data via aggregated block data from the Redistricting Data Hub

VII. The Pre 2020 and Adopted 2021 Plan Demographics

A. Pre 2020 Plan

38. The major race/ethnicity demographics for the Pre 2020 Plan are shown in Table 4. The Pre 2020 Plan has two majority-Black commissioner districts, District 1 and 2. Each of these districts is significantly above 50% Black (District 1 is 78.30% and District 2 is 69.01%). The other two districts are less than 50% but greater than 30% Black (Districts 3 and 4 are 30.06% and 32.46%, respectively). District 5 contains the lowest Black percentage and is 14.27% Black.

Table 4 – TTL Population Commissioner District Pre 2020 Plan for Jefferson, AL

District	Population	Black	% Black	White	% White	Other	Other%
1	122,600	96,001	78.30%	19,188	15.65%	7,411	6.04%
2	121,159	83,612	69.01%	26,890	22.19%	10,657	8.80%
3	142,865	42,943	30.06%	87,735	61.41%	12,187	8.53%
4	142,059	46,119	32.46%	81,545	57.40%	14,395	10.13%
5	146,038	20,840	14.27%	108,894	74.57%	16,304	11.16%

Note: White population is Not Hispanic Alone (Single Race). The Black population is "any part" Black, which is an aggregation of all Black combined race categories, including Hispanic or Latino Black. Latino is Hispanic or Latino population of all races. The Other columns are calculated by subtracting Black plus White columns from the total population. Rounding errors may exist in the table.

Source: U.S. Census Bureau 2020 Census Data

B. The Adopted 2021 Plan

39. The major race/ethnicity demographics for the Adopted 2021 Plan are shown in Table 5. As with the Pre 2020 Plan, the Adopted 2021 Plan has two single majority-Black commissioner districts (Districts 1 and 2). Once again, each of these districts continues to be significantly above 50% Black (District 1 is 78.27% and District 2 is 66.18%). The other three districts are now less than 30% Black (Districts 3 and 4 are lower at 27.28% and 28.45%, respectively while District 5 is lower than previously as well with 14.15%).

Table 5 – TTL Population Commissioner District Adopted 2021 Plan for Jefferson, AL

District	Population	Black	% Black	White	% White	Other	Other%
1	135,524	106,070	78.27%	21,226	15.66%	8,228	6.07%
2	134,748	89,177	66.18%	33,196	24.64%	12,375	9.18%
3	133,751	36,502	27.29%	85,885	64.21%	11,364	8.50%
4	136,078	38,711	28.45%	83,081	61.05%	14,286	10.50%
5	134,620	19,055	14.15%	100,864	74.93%	14,701	10.92%

Note: White population is Not Hispanic Alone (Single Race). The Black population is "any part" Black, which is an aggregation of all Black combined race categories, including Hispanic or Latino Black. Latino is Hispanic or Latino population of all races. The Other columns are calculated by subtracting Black plus White columns from the total population. Rounding errors may exist in the table.

Source: U.S. Census Bureau 2020 Census Data

C. Pre 2020 and Adopted 2021 Demographic Comparison of Plans

40. Table 6 provides a comparison of demographic ranges of the districts' Black percentage for the Pre 2020 and Adopted 2021 Plans. Table 6 reveals a shift in the overall Black percentages of the districts.

Table 6 – Black % (in Ranges) of Commissioner Districts
for the Pre 2020 and Adopted 2021 Plans for Jefferson County, AL

Black % of District	Pre 2020 Districts	Adopted 2021 Districts
> 65%	1, 2	1, 2
30% to 65%	3, 4	
<30%	5	3, 4, 5

Source: Maptitude for Redistricting Population Summary Reports using 2020 Census Data

41. The Pre 2020 Plan contains the majority of districts with Black percentages greater than 30% (Districts 1, 2, 3, and 4) with two greater than 65% (Districts 1 and 2). However, population shifts from the Pre 2020 to the Adopted 2021 Plans are noticeable, specifically including the demographic shifts in Districts 3 and 4. Districts 3 and 4 in the Adopted Plan decreased from above 30% Black to below 30%. Although Districts 1 and 5 did not change significantly in the racial make-up, they each play a role in either the addition or removal of racial population (See Analyzing for Race Predominating section).

VIII. Analyzing for Race Predominating

A. Introduction

42. In order to determine whether race predominated during the plan development process, I reviewed and analyzed the population changes that occurred from the Pre 2020 Plan to the

Adopted 2021 Plan. The analysis included a district-to-district change comparison and whether VTDs were split or wholly added or removed along racial lines. The analysis focused on racial populations (specifically Black and White) that were added, removed, and overall changed from the Pre 2020 to the Adopted 2021 Plans. Finally, I considered that the relatively high racial percentages and potential “packing”¹⁸ issues of District 1 and 2 in the Pre 2020 Plan could have been transferred to the Adopted 2021 Plan due to a type of “Least Change” approach occurring via the redistricting process.¹⁹

43. Particularly, it is noticeable that the Pre 2020 Plan includes two districts with a high percentage of Black population, Districts 1 and 2. Both districts are above 65% Black with District 1 being even higher with a Black percentage above 78%. Since the drafters of the Adopted 2021 Plan decided to select a least change approach for plan development, it was likely that Districts 1 and 2 would remain close to the same high Black percentage. That said, even using the least change approach, the following analysis reveals that the population shifts used to bring the plan within acceptable deviation, appear to be largely guided by racial considerations.

B. Demographic Shifts in Population from the Pre 2020 Plan

44. Reviewing the Pre 2020 Plan using the 2020 Census Data the overall population deviation is 18.44% (See Appendix C). Thus, population shifts to the Pre 2020 were necessary to bring the plan within the plus or minus 1% maximum overall deviation employed by the drafters and constitutional compliance of 10%, albeit without race predominating. Although the changes

¹⁸ Packing “involves concentrating a group’s electoral strength so as to dilute the group’s political power.” See <https://ssrn.com/abstract=3540444>

¹⁹ The Least Change approach in redistricting performs the minimal changes to a plan that brings that plan within acceptable population deviation.

from the Pre 2020 to the Adopted 2021 Plan were not numerous, they were impactful (See Figure 1). In addition, lowering the Pre 2020 Plan's population deviation to an acceptable deviation) could have been achieved without race predominating during the process (See Illustrative Plan section).

**Jefferson County, Alabama
Commissioner Districts
Adopted 2021 Boundary w/Pre-2020 Color Background**

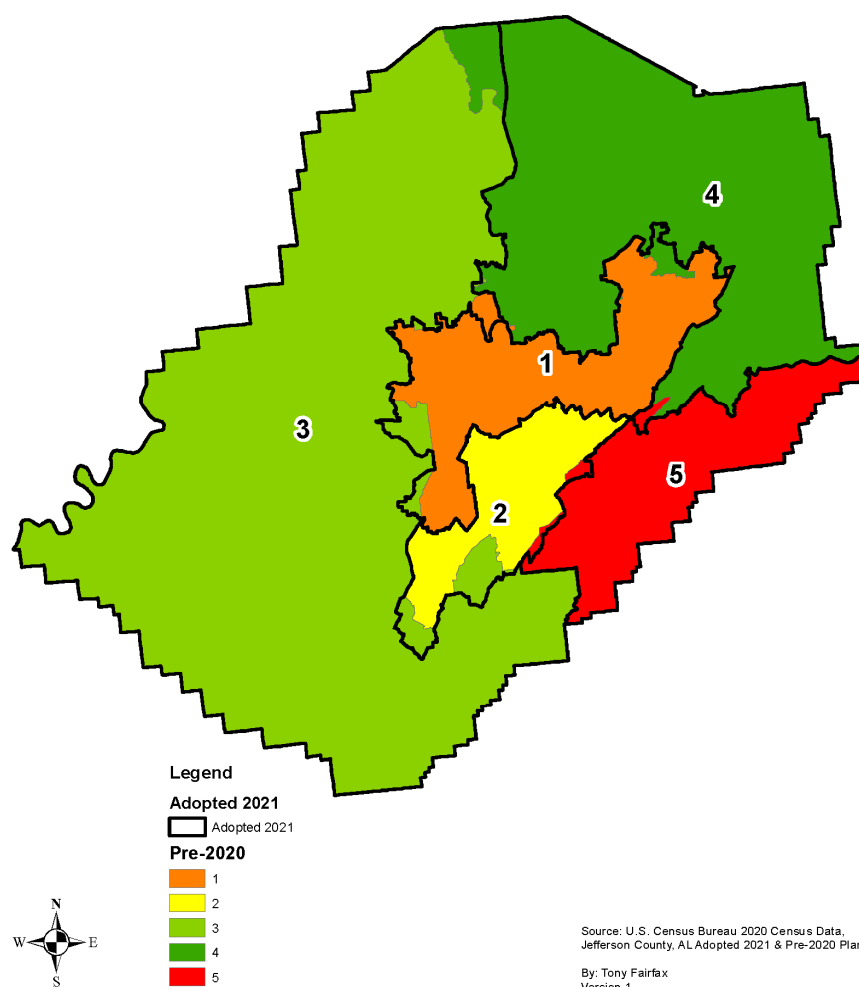


Figure 1 – Adopted 2021 Plan w/Pre 2020 Plan as Background Color

C. District Changes in Black and White Population

45. Reviewing the changes made to the Adopted 2021 Plan from the Pre 2020 plan, several are notable. Most of the specific changes appear to be associated or aligned with demographics of the districts. For instance, District 1, which was underpopulated and with the over 78% Black population increased in Black population significantly more than White population. However, Districts 3 and 4, which were overpopulated and with populations now under 30% Black, had more Black population removed than White population.

46. Specifically, District 1 which was underpopulated by 12,344 added a greater amount of Black population than White (See Table 7). Table 7 depicts the overall change in population and major racial demographics from the Pre 2020 to the Adopted 2021 Plan. The rows with red background indicate the district with a significant amount of Black population (>65%) and a greater amount of Black population added than White population. The Blue background indicates the districts with a lower amount of Black population (<30%) and greater number of Black persons that were removed than White persons.

Table 7 – Population Changes in Commissioner Districts
From the Pre 2020 to the Adopted 2021 Plans for Jefferson County, AL

District	Black %	Added	Removed	Change	Black	White
1	>65%	13,073	149	12,924	10,069	2,038
2	>65%	13,626	37	13,589	5,565	6,306
3	<30%	1,597	10,711	-9,114	-6,441	-1,850
4	<30%	4,886	10,867	-5,981	-7,408	1,536
5	<30%	11	11,429	-11,418	-1,785	-8,030

Source: Maptitude for Redistricting Core Constituencies report using Census Bureau 2020 data (See Appendix E)

Note: Negative numbers reflect population removed.

47. Figure 2 provides a graph representation of the change in White and Black populations for Districts 1, 3, and 4. There were 10,069 Black persons added to the underpopulated District 1, while only 2,038 White persons were added. Conversely, District 3, was overpopulated by 7,921 persons and thus the population was removed. A greater amount of Black population was removed from District 3 than White population. District 3 removed 1,850 White persons while removing 6,441 Black persons. District 4 was also overpopulated, so additional population needed to be removed from the district. However, although population needed to be removed from the district, District 4 added 1,536 White persons while removing 7,408 Black persons.

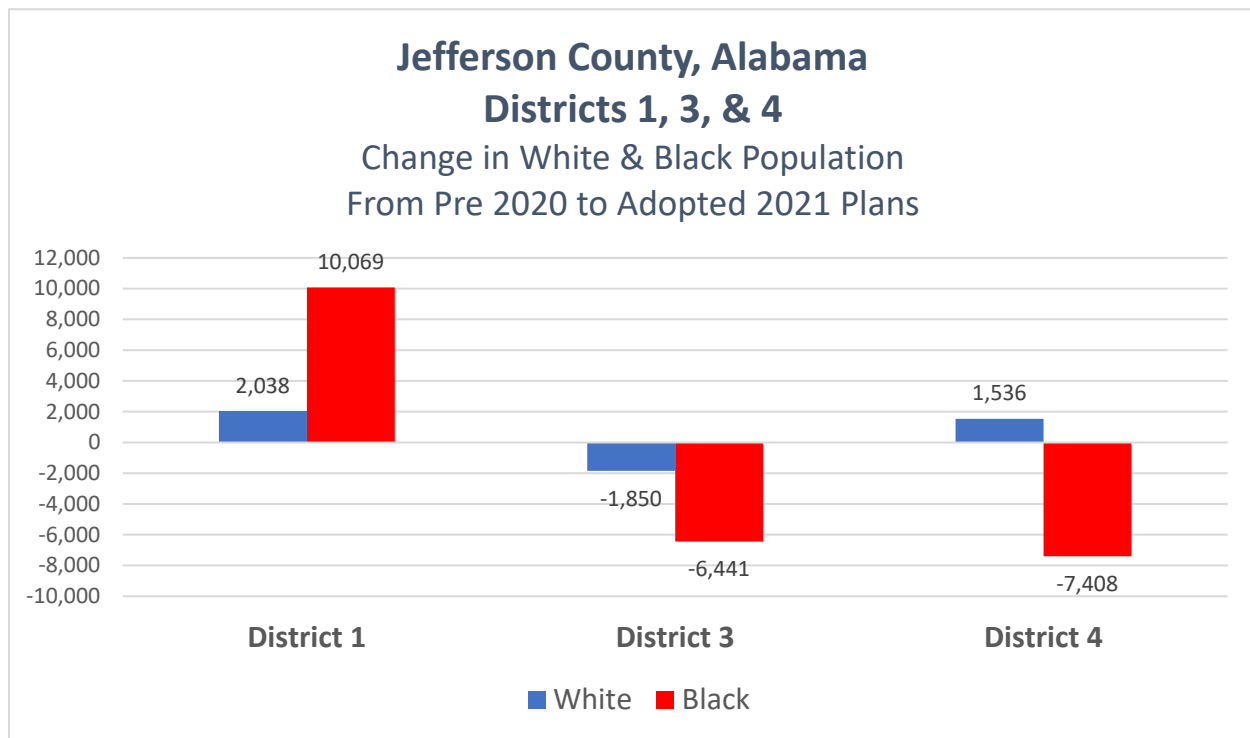


Figure 2 – District 1, 3 & 4 Pre 2020, and Adopted 2021 Plan Changes in White-Black

48. Also, it is notable that even though District 5 did not appear to follow the same pattern as Districts 3 and 4 (which had a greater amount of White population removed than Black population), the White percentage continued to increase. District 5 increased its White percentage from 74.57% in the Pre 2020 Plan to 74.93% in the Adopted 2021 Plan. In fact, Districts 3, 4, and 5 increased in White percentage from the Pre 2020 to Adopted 2021 Plans (See Figure 3). This is noteworthy specifically since the White percentage overall for the county decreased 3.61% over the past decade (See Table 1).

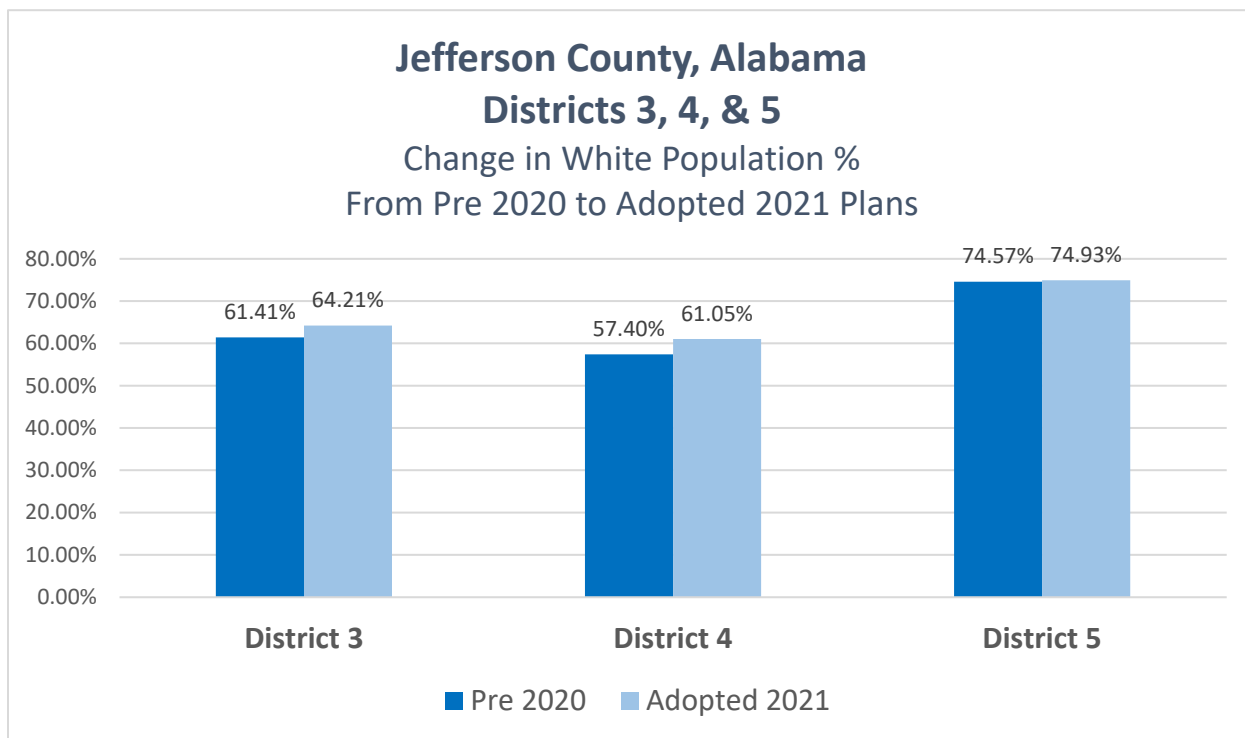


Figure 3 – District 3, 4 & 5 Pre 2020 and Adopted 2021 Plan's White%

49. The demographic shifts of Districts 1, 3, 4, and the increase in White percentage of District 5 are evidence of race predominating during the redistricting process.

D. Splitting VTDs Along Racial Lines in Districts 1 and 2

50. In the previous section, it was shown that District 1, with a significant Black population, received a greater amount of Black population than White population. On the other hand, Districts 3 and 4, with a lower amount of Black population, removed a greater amount of Black population than White population. These shifts of racial population were achieved in part by splitting VTDs along racial lines.

51. I did note that the 2023 Precinct boundaries have been adjusted from the 2020 Precincts (that generally corresponded to the 2020 VTDs), such that many of the split VTDs were no longer split. The 2023 Precincts contain new precincts in place of the split. These appear to be accomplished post redistricting during the precinct realignment phase.²⁰ However, even if I analyzed the Adopted 2021 Plan using the 2023 Precincts, the shifting of racial population continues to occur, instead with the newly drawn whole 2023 Precincts.

52. That said, one of the signs of a racial gerrymandered redistricting plan is splitting local areas to achieve mostly a racial goal or objective. The Adopted 2021 Plan split VTDs along racial lines²¹ that increased the Black population in the majority Black districts more than if the whole VTD was added.

53. For instance, the East Pinson Valley Center VTD in the Pre 2020 Plan was originally in District 4. However, in the Adopted 2021 Plan the VTD was split. The split of the East Pinson Valley

²⁰ Precinct realignment usually occurs after the redistricting process in order to adjust the boundaries of precincts to reduce or eliminate split precincts.

²¹ In the context of this analysis, dividing along racial lines equates to the splitting of an area such that it places a larger portion of a specific racial group in a district in order to increase the group's population. It may not always equate to the racial group being above 50% and another being below 50%,

Center VTD was divided such that a larger percentage of Black population was placed in District 1, one of the majority Black districts (See Figure 4).

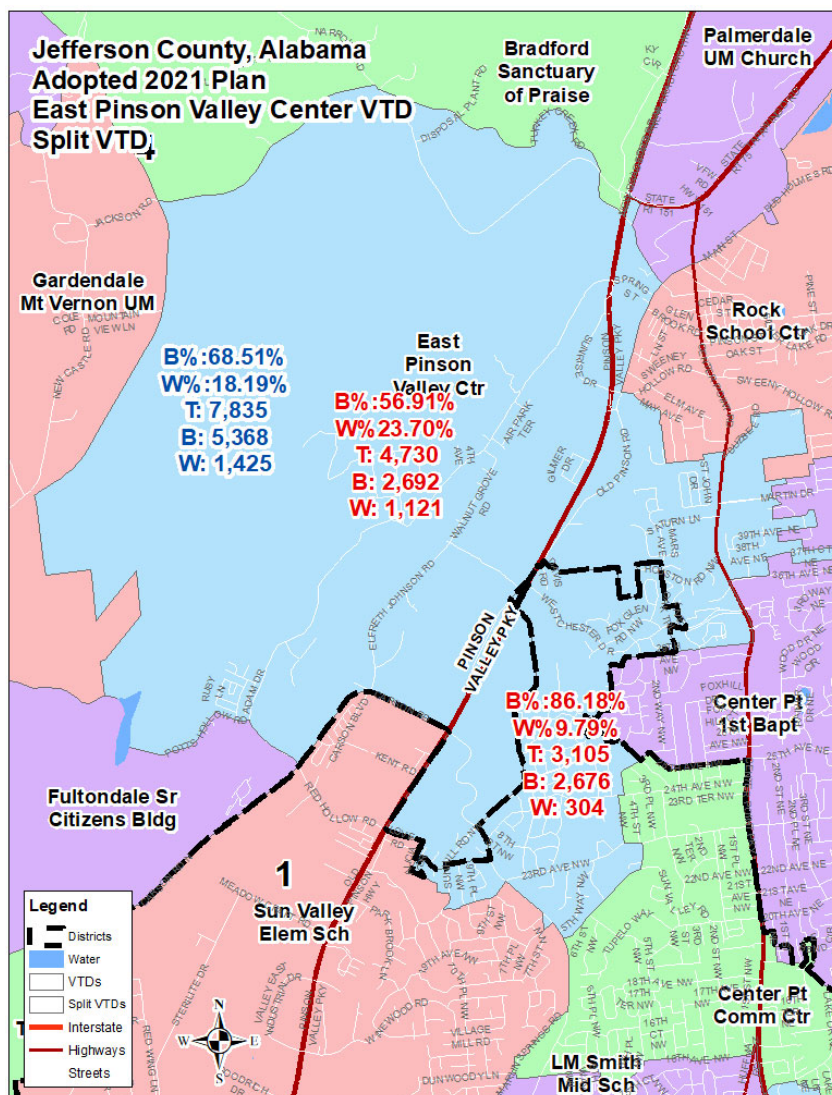


Figure 4 – East Pinson Valley Center Split VTD

54. Although, the portion of the VTD remaining in District 4, was 56.91% Black, the portion placed in District 1 was 86.18% Black (shown in the red labels). It is important to note that adding the 56.91% portion (and the entire VTD shown in the blue label) would have had the

effect of lowering the Black population percentage in District 1. However, adding only the portion that is 86.18% had the effect of increasing the Black population percentage. This single VTD adds 2,676 Black persons out of the 10,069 total Black persons that were added to District 1 from the Pre 2020 to the Adopted 2021 Plan.

55. The split of East Pinson Valley Center performs two race directed aspects. As previously shown, it increases the Black population contained within District 1. On the other hand, it also decreases the Black population contained within District 4. So, the removal of 2,676 Black persons contributes to the lowering of Black percentage in District 4 and reducing the district under 30% Black. Thus, this splitting of a VTD with the removal of Black population has a dual effect of also increasing the White percentage for District 4. As shown in Figure 4, the portion of East Pinson Valley Center VTD within District 4 changes from 18.19% White (displayed by blue labels reflecting the entire VTD) to 29.66% White (presented by the red labels showing the portion left in District 4).

56. The split of East Pinson Valley also divides the city of Center Point and does not follow the city's boundary (See Figure 5). The rationale for the splitting appears to be due to the carving out of a significantly Black portion of East Pinson Valey Center VTD.

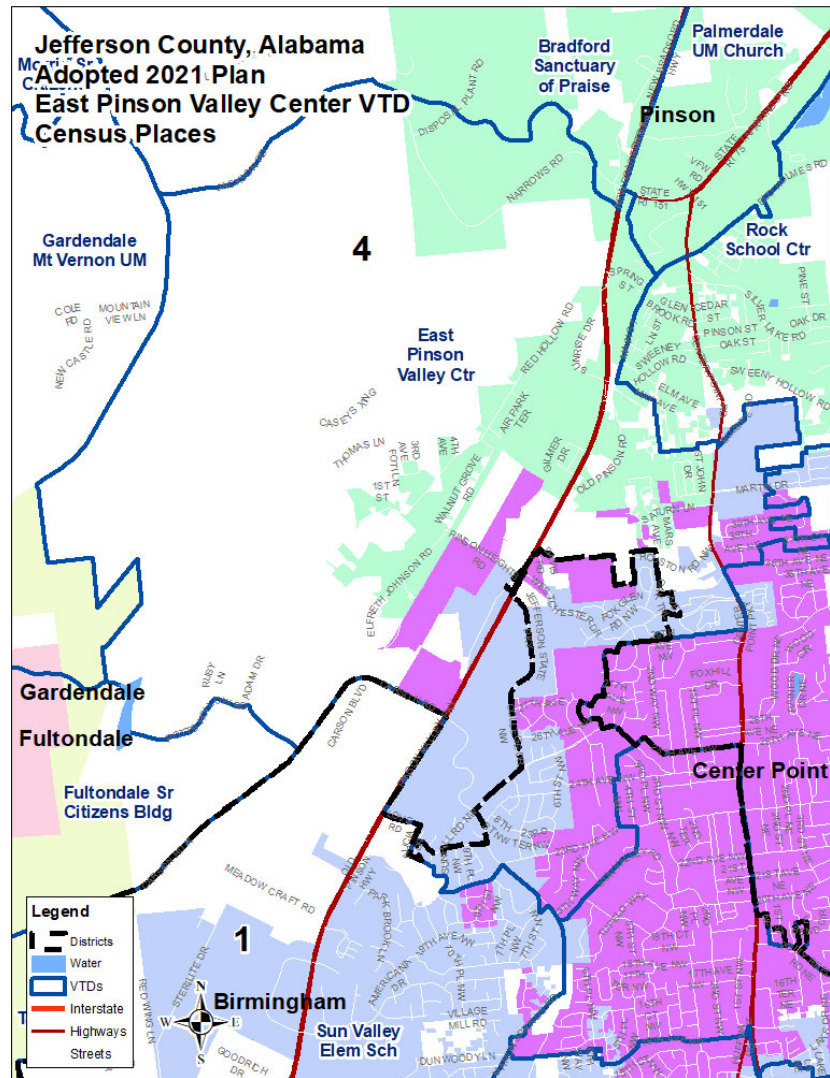


Figure 5 – East Pinson Valley Center Split w/Census Places

57. Further analysis below shown in Figure 9, provides additional support for the rationale for splitting of the East Pinson Valley Center VTD. East Pinson Valley Center not only is divided along racial lines but appears to be split to include the most concentrated area of Black population contained with the VTD.

58. Another example of a VTD split along racial lines can be seen viewing Bessemer Civic Center (See Figure 6). The split VTD places a greater amount of Black population in District 2 than White.

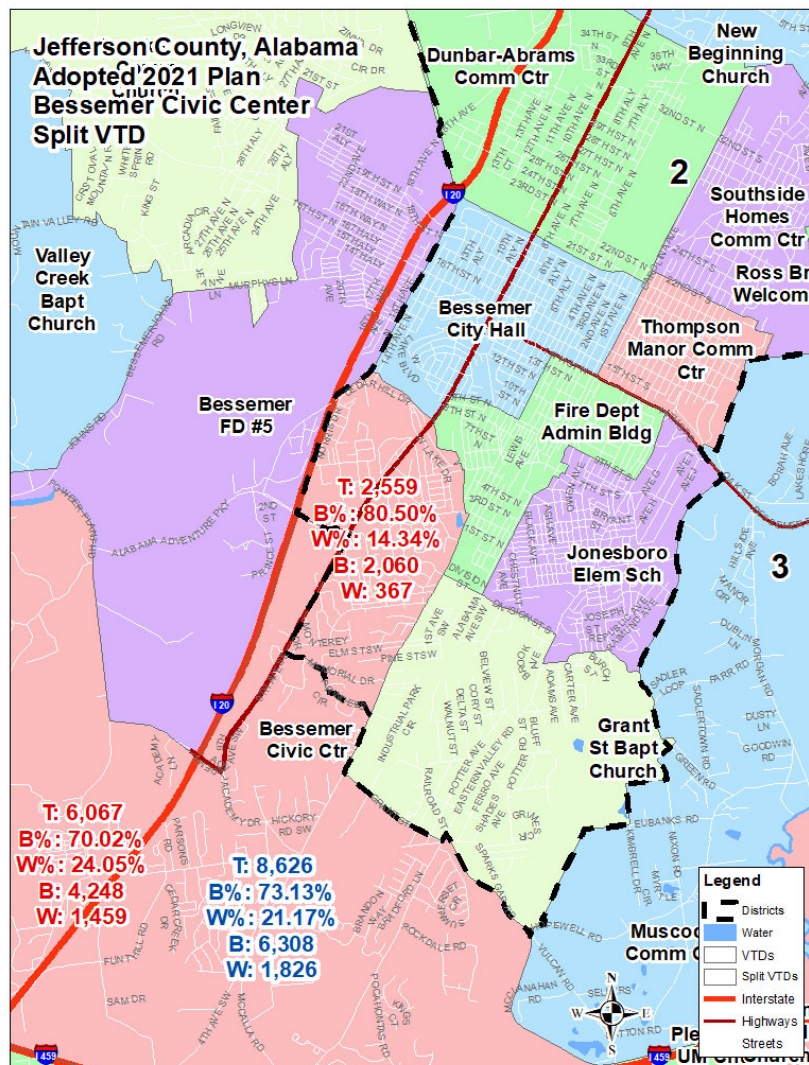


Figure 6 – Bessemer Civic Center Split VTD

59. Bessemer Civic Center VTD was originally wholly contained within District 3 in the Pre 2020 Plan. However, in the Adopted 2021 Plan the VTD is split and places 2,559 persons in District 2. Out of the 2,559 persons, 80.50% were Black, and only 14.34% were White. The remaining

portion of the Bessemer Civic Center VTD was 70.02% Black and continues to exist in District 3. As with East Pinson Valley Center, the split of Bessemer Civic Center VTD does not follow municipal boundaries (See Appendix D).

60. Similar to the splitting of East Pinson Valley Center, the splitting of Bessemer Civic Center performs two race directed aspects. Splitting Bessemer Civic Center increases the Black population contained within District 2 and decreases the Black population contained within District 3. So, the removal of 2,060 Black persons also contributes to the lowering of Black percentage in District 3 and reducing the district under 30% Black.

61. Ross Bridge Welcome Center VTD was also split along racial lines and was even more stark. The split VTD places a significant amount of Black population in District 2 (See Figure 7). Ross Bridge Welcome Center VTD was originally wholly contained within District 3 in the Pre 2020 Plan. Although Ross Bridge Welcome Center VTD split divides to some extent along municipal lines (See Appendix D), its split racial effect is dramatic.

62. In the Adopted 2021 plan the VTD is split and places 2,068 persons in District 2. Out of the 2,068 persons added to District 2, 52.80% were Black although the entire VTD is only 23.38% Black. The remaining portion of the Ross Bridge Welcome Center VTD was 13.21% Black and continues to exist in District 3.

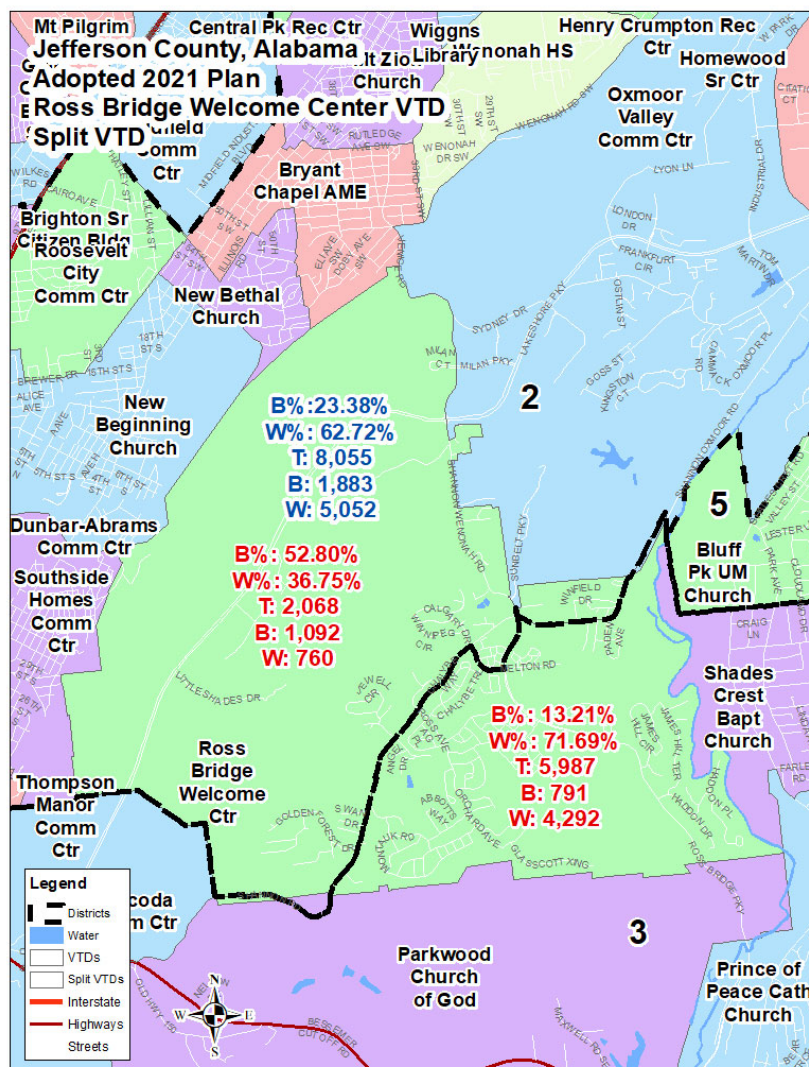


Figure 7 – Ross Bridge Welcome Center Split VTD

63. Similar to the other two split VTDs the results perform two race directed aspects. Once again, the splitting of Ross Bridge Welcome Center increases the Black population contained within District 2 and decreases the Black population contained within District 3. So, the removal of 1,092 Black persons again contributes to the lowering of Black percentage in District 3 and reducing the district under 30% Black.

64. In addition, the splitting increases the White percentage contained within District 3. Figure 7 shows that the White percentage of the entire Ross Bridge Welcome Center VTD is 62.72% White and 23.38% Black (shown in the blue label). However, after the split, the portion that remains in District 3 is 71.69% White. Consequently, adding the entire Ross Bridge Welcome Center VTD would decrease District 2's Black percentage lower than the 66.18% ultimately in the Adopted 2021 Plan.

65. There were multiple split VTDs that shifted a larger Black population than White population to the majority Black districts of 1 and 2. Table 8 presents a list²² of VTDs that shifted greater than 100 persons, were split from the Pre 2020 Plan to Adopted 2021 Plan, and have been moved from a non-majority Black district to Districts 1 or 2.

Table 8 – Split VTD Population Shifted to District 1 or 2

Dist to Dist	VTD Name	VTD Pop	Population Shifted	Black	White	Black%	White%
3 to 1	Dolomite W Field Comm Ctr	1922	1284	1112	105	86.60%	8.18%
4 to 1	East Pinson Valley Ctr	7835	3105	2676	304	86.18%	9.79%
3 to 2	Ross Bridge Welcome Ctr	8055	2068	1092	760	52.80%	36.75%
3 to 2	Bessemer Civic Ctr	8626	2559	2060	367	80.50%	14.34%
5 to 2	Birmingham Botanical Gardens	1324	210	0	191	0.00%	90.95%
5 to 2	Oxmoor Valley Comm Ctr	5680	2223	632	1214	28.43%	54.61%

Source: Pre-2020 and Adopted 2021 Plans Block Data Analysis

Note: Excludes shifts in population under 100 persons.

66. Table 8 shows that two split VTDs with a total population of 4,389, a Black population of 3,788, and a White population of 409 were shifted to District 1 from non-majority Black

²² See Appendix D for all new VTD splits that occurred from the Pre-2020 Plan to the Adopted 2021 Plan.

districts (Districts 3 and 4). Thus, excluding VTDs that shifted under 100 persons, 86.31% of the total population shifted were Black, while 9.32% were White.

67. Four split VTDs with a total population of 7,060, a Black population of 3,784 and a White population of 2,532 were shifted to District 2 from non-majority Black districts (Districts 3 and 5). In this case 53.60% of the total population were Black while 35.86% were White (excluding shifts less than 100 persons).

E. Adding or Removing Whole VTDs Along Racial Lines in District 1 and 2

68. The splitting of a single VTD along racial lines is not necessarily clear evidence of racial predominance in a plan. However, the splitting in the Adopted 2021 Plan is only part of an overall pattern of race guiding the development of the plan.

69. In addition to splitting VTDs along racial lines, whole VTDs were added or removed from the Pre 2020 districts to Adopted 2021 districts, seemingly according to their racial makeup. Three whole VTDs were added to District 1 in the Pre 2020 Plan (See Figure 8).

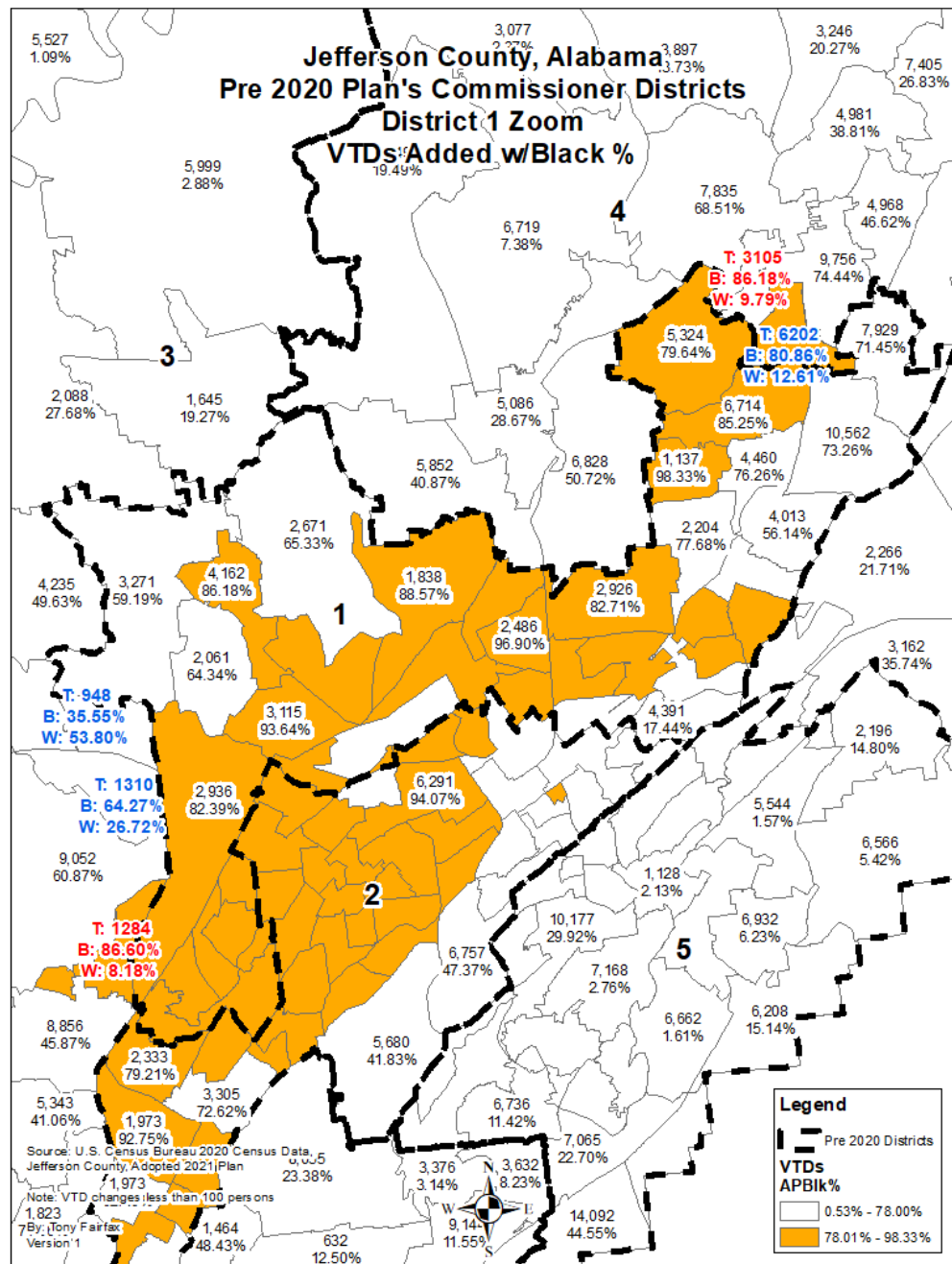


Figure 8 – VTDs Added to District 1 in the Pre 2020 Plan

70. Figure 8 includes labels with total population and Black percentage of the VTDs. The whole VTDs added are shown in the blue labels while the red labels reflect the split VTDs. Figure 8 also colors the VTDs that are greater than 78% Black in an orange color. In addition to the two

split VTDs, the figure also shows the three whole VTDs that were added to the Adopted Plan's District 1.

71. The percentage of 78% was selected to show those VTDs that would increase or maintain District 1 at the same or higher Black percentage. Reviewing Figure 8 reveals only two VTDs adjacent to District 1, which are not contained within District 2 (Pre 2020 Plan) and contain a Black percentage above 78% (orange color). One is Dolomite W Field Comm Center located on the southwest of District 1 and the other is Center Point Community Center, located in the northeast.
72. A substantial portion of Dolomite W Field Comm Center was added to District 1, albeit as a split VTD. However, the portion of Dolomite W Field Comm Center added to District 1 has an exceptionally high Black percentage at 86.60%. Although the entire VTD is slightly higher at 90.17% Black, the portion in District 1 remains sufficiently above the Pre 2020 Plan percentage of 78%.
73. While there are other options available that would bring the district within acceptable population deviation, the Adopted 2021 Plan adds the only two adjacent non-District 2 VTDs that are above 78% Black. All the other adjacent VTDs, not contained within District 2, have a Black percentage lower than 78% and would lower the Black percentage of District 1 if added.

74. It is important to note that adding the entire Center Point Baptist Church VTD, which lies directly above and has a Black percentage of 74.43%, would cause District 1's population to exceed the acceptable population deviation (since it adds an additional population of 9,756).
75. Also, District 1 could have expanded further and added population to the already split VTD of East Pinson Valley Center instead of Dolomite W Field Comm Center and the other two VTDs on the southwest of District 1. Although the split of East Pinson Valley Center VTD limits itself to below the Pinson Valley Parkway, a thematic view of the VTD reveals the potential reason (See Figure 9). The map in Figure 9 shows a stark difference between the Black percentage of census blocks south of the Pinson Valley Parkway and those north.
76. Figure 9 focuses on East Pinson Valley Center and the portion that was added to District 1. Figure 9's color thematic background shows the percentage of Black of each census block. The green and yellow color represent a census block with a Black percentage of 0% to 25% and 25% and 50%, respectively. The orange and red color represent a Black percentage 50% to 75% and 75% to 100%, respectively.

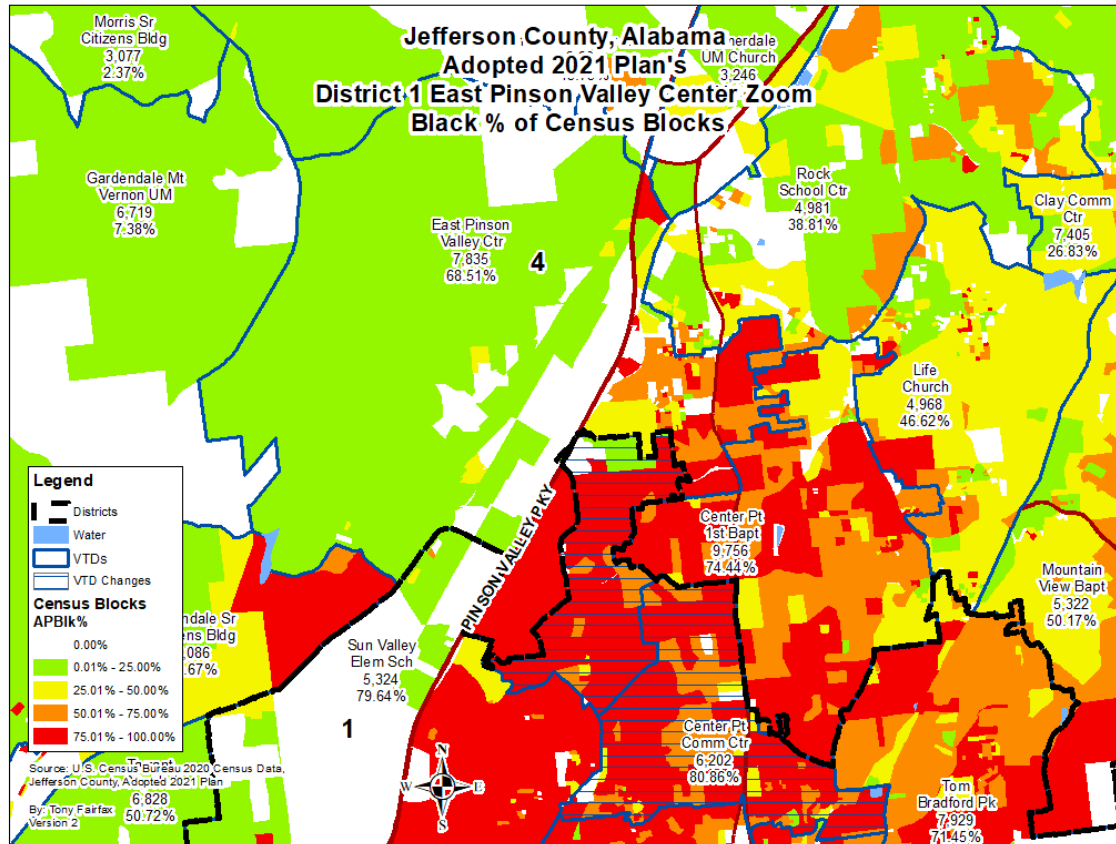


Figure 9 – Adopted 2021 Plan's District 1 East Pinson Valley Ctr w/Black% of Census Blocks

77. The blue hatch lines on the map represent the areas added to District 1 in the Adopted 2021 Plan. These include the entire VTD of Center Point Community Center and the split of East Pinson Valley Center VTD. After adding these two areas (and the split part of the Dolomite West Field Community Center), additional population to bring District 1 close to the ideal population is still needed. It is noticeable the split portion of East Pinson Valley Center contains an abundance of majority Black (orange and red) census blocks.

78. Also, since the East Pinson Valley Center VTD was already split, an additional population could have been added to bring the population closer to the ideal population instead of adding two additional VTDs on the east of District 1. However, expanding further into East Pinson

Valley Center in a compact manner would require adding census blocks in the green and yellow areas of East Pinson Valley Center VTD. These census blocks would add a significantly lower Black percentage to District 1. Thus, the reason why District 1 was not expanded north across the Pinson Valley Parkway seems to be that it would add census blocks that are below 50% Black (See Figure 7).

79. Another option could have been to extend District 1's area in East Pinson Valley Center to the east of the VTD, creating a relatively long extension. This would have added additional census blocks that are majority Black as opposed to those in the north of the VTD. However, this finger-type extension would have been fairly noncompact and noticeably so. Regardless, the final configuration of the Adopted 2021 Plan's split portion in East Pinson Valley Center is 86.18% Black.

80. The other two whole VTDs that were added to District 1 are Baptist Church of McAdory and Hoover Met Stadium with lower population and Black percentages of 64.27% and 35.55%, respectively. The Hoover Met Stadium VTD has the lowest population out of the two and thus the lowest impact in Black percentage for District 1. Although Baptist Church of McAdory and Hoover Met Stadium have a Black percentage less than Pre-2020 Plan's District 1's percentage of 78%, collectively along with Center Point Community Center, Dolomite W Field Comm Center, and the portion of East Pinson Valley VTDs they have a resultant percentage extremely close at 77.69% (See Table 9).²³

²³ There are two lower populated VTD segments that are also added to the district. These appear to be added due to an attempt to match the boundaries of the 2020 precincts.

Table 9 – Whole and Split VTDs Added to District 1 of the Adopted 2021 Plan

VTD Name	Dist to Dist	VTD Pop	Population Shifted	Black	White	Black%	White%	Split
Bapt Church of McAdory	3 to 1	1310	1310	842	350	64.27%	26.72%	W
Dolomite W Field Comm Ctr	3 to 1	1922	1284	1112	105	86.60%	8.18%	S
Hoover Met Stadium	3 to 1	948	948	337	510	35.55%	53.80%	W
Center Pt Comm Ctr	4 to 1	6202	6202	5015	782	80.86%	12.61%	W
East Pinson Valley Ctr	4 to 1	7835	3105	2676	304	86.18%	9.79%	S
Total to District 1		18217	12849	9982	2051	77.69%	15.96%	

Source: Pre-2020 and Adopted 2021 Plans Block Data Analysis

Note: Excludes population shifts of less than 100. W=Whole VTD, S=Split VTD

81. When reviewing the whole VTDs that were shifted to District 1, the pattern continues similarly to the split VTDs, with the exception of one VTD. The VTD of Hoover Met Stadium was moved from District 3 to District 1 with 35.55% Black (See Table 9). However, as previously mentioned, the VTD had a low amount of only 948 persons. Thus, only one out of the five VTDs shifted to District 1 was majority White and contained a Black percentage less than 64% Black (See Table 9).

82. Three whole VTDs were shifted to District 2, from non-majority Black districts, with one majority White (Homewood Excp Foundation), another majority Black (Afton Lee Comm Ctr), and the third predominantly White (Grant St Bapt Church). Combined total population shifted was 6,524 with 1,778 Black persons added, and 3,781 White persons added to District 2 (See Table 10).

83. Even though the total of seven whole and split VTDs added to Pre 2020 Plan's District 2 is only 40.95% Black, the resultant District 2 in the Adopted 2021 Plan remains fairly high at 66.18%. The size of Black and White populations added to District 2 are almost comparable

to each other, with neither in the majority. Almost 41% (40.95%) of the population added were Black, while 46% (46.47%) were White. The result is that District 2 decreases its Black percentage by only 2.83% and remains above 65%.

Table 10 – Whole and Split VTDs Added to District 2 of the Adopted 2021 Plan

VTD Name	Dist To Dist	VTD Pop	Population Shifted	Black	White	Black%	White%	Split
Bessemer Civic Ctr	3 to 2	8626	2559	2060	367	80.50%	14.34%	S
Grant St Bapt Church	3 to 2	2381	2381	1040	1063	43.68%	44.65%	W
Ross Bridge Welcome Ctr	3 to 2	8055	2068	1092	760	52.80%	36.75%	S
Afton Lee Comm Ctr	5 to 2	335	335	174	60	51.94%	17.91%	W
Birmingham Botanical Gardn	5 to 2	1324	210	0	191	0.00%	90.95%	S
Homewood Excpt Foundation	5 to 2	3808	3808	564	2658	14.81%	69.80%	W
Oxmoor Valley Comm Ctr	5 to 2	5680	2223	632	1214	28.43%	54.61%	S
Total to District 2		30209	13584	5562	6313	40.95%	46.47%	

Source: Pre-2020 and Adopted 2021 Plans Block Data Analysis

Note: Excludes population shifts of less than 100. W-Whole VTD, S=Split VTD

F. Split and Whole VTD Population Shifts in Districts 3, 4, and 5

84. Although attention should be given to the demographic makeup of the split and whole VTDs added to Districts 1 and 2, it is noteworthy to view the effects of the non-majority Black districts 3, 4, and 5. The shifting of split or whole VTDs of more Black population than White population to District 1 also had the impact of removing Black population from Districts 3 and 4. Table 11 shows the VTD population that was removed from Districts 3 and 4. Once again, the table excludes VTD population shifts of less than 100 persons.

Table 11 – VTD Population Shifted from Districts 3, 4, and 5

Dist To Dist	VTD Name	VTD Pop	Population Shifted	Black	White	Black%	White%	Split
3 to 1	Hoover Met Stadium	9,48	948	337	510	35.55%	53.80%	W
3 to 1	Dolomite W Field Comm Ctr	1,922	1,284	1,112	105	86.60%	8.18%	S
3 to 1	Bapt Church of McAdory	1,310	1,310	842	350	64.27%	26.72%	W
3 to 2	Ross Bridge Welcome Ctr	8,055	2,068	1,092	760	52.80%	36.75%	S
3 to 2	Grant St Bapt Church	2,381	2,381	1,040	1,063	43.68%	44.65%	W
3 to 2	Bessemer Civic Ctr	8,626	2,559	2,060	367	80.50%	14.34%	S
	Total From District 3	23,242	10,550	6,483	3,155	61.45%	29.91%	
Dist to Dist	VTD Name	VTD Pop	Population Shifted	Black	White	Black%	White%	
4 to 1	East Pinson Valley Ctr	7,835	3,105	2,676	304	86.18%	9.79%	S
4 to 1	Center Pt Comm Ctr	6,202	6,202	5,015	782	80.86%	12.61%	W
4 to 3	Warrior City Hall	3,955	1,445	51	1,308	3.53%	90.52%	S
	Total From District 4	17,992	10,752	7,742	2,394	72.01%	22.27%	
Dist to Dist	VTD Name	VTD Pop	Population Shifted	Black	White	Black%	White%	
5 to 2	Birmingham Botanical Gardn	1,324	210	0	191	0.00%	90.95%	S
5 to 2	Afton Lee Comm Ctr	335	335	174	60	51.94%	17.91%	W
5 to 2	Oxmoor Valley Comm Ctr	5,680	2,223	632	1,214	28.43%	54.61%	S
5 to 4	McElwain Bapt Church	4,787	4,787	410	3,865	8.56%	80.74%	W
	Total From District 5	12,126	7,555	1,216	5,330	16.10%	70.55%	

Source: Pre-2020 and Adopted 2021 Plans Block Data Analysis

85. Table 11 indicates that 10,550 persons were shifted from District 3 containing 6,483 Black persons (61.45%) and 3,155 White persons (29.91%). The removal of a significantly more Black population than White population has the effect of decreasing the Black percentage and increasing the White percentage in District 3.

86. Table 11 also indicates that 10,752 persons were shifted from District 4 containing 7,742 Black persons (72.01%) and 2,394 White persons (22.27%). Once again, the removal of a significantly larger Black population than White population has the effect of decreasing the Black percentage and increasing the White percentage in District 4.
87. The impact of the shifting of split and whole VTDs is that District 3 decreased from 30.06% Black in the Pre 2020 Plan to 27.29% in the Adopted 2021 Plan. The White percentage of District 3 increased from 61.41% to 64.21% (See Tables 4 and 5).
88. District 4 was impacted similarly with shifting of split and whole VTDs that decreased from 32.46% Black in the Pre 2020 Plan to 28.45% in the Adopted 2021 Plan. The White percentage of District 4 increased from 57.40% to 61.05% (See Tables 4 and 5).
89. At first glance, District 5 does not possess the same pattern as Districts 3 and 4. District 5 removes a greater amount of White population than Black population. However, a close look reveals that District 5 removes a proportionately larger amount of Black population than White population. Over 16 percent of the population removed are Black and approximately 70% are White. Since the Black percentage of District 5 for the Pre 2020 Plan is 14.27% a higher percentage (16.10%) is removed. Similarly, the White percentage for the Pre 2020 Plan is 74.57% and a lower percentage of White population was removed. The net effect is that District 5 decreases in Black percentage and increases in White percentage from the Pre 2020 Plan to the Adopted 2021 Plan.

G. Summary Evidence of Racial Gerrymandering

90. Evidence exists of racial gerrymandering during the development of the Adopted 2021 Plan.

A pattern exists in Districts 1, 3, and 4 of adding a greater amount of Black population than White population to the majority Black districts and removing a greater amount of Black population than White population from the majority White districts. To accomplish this²⁴:

- a) The majority Black District 1 adds population of split VTDs along racial lines with practically all of the portions added greater than 80% Black.
- b) The majority Black District 1 adds population of whole VTDs with the majority of them greater than 80% Black where other options exist.
- c) The majority White District 3 removes population from split VTDs with each of the portions between 52.80% to 86.60% Black.
- d) The majority White District 4 removes population from a split VTDs that is 86.18% Black and a whole VTD that is 80.86% Black.

91. Evidence exists of minimizing the decrease in Black percentage in District 2, including splitting VTDs along racial lines and whole VTDs greater than 50% Black. To accomplish this:

- a) The majority Black District 2 adds population of split VTDs along racial lines with half of them between than 52.80% and 80.50% Black.

²⁴ Analyzing shifting of areas greater than 100 persons.

b) The majority Black District 2 adds a comparable amount of Black and White population with neither in the majority. The population added includes a combination of a majority Black split and whole VTDs such that the Adopted 2021 Plan's district remains above 65% at 66.18% Black.

92. Although District 5 decreases and removes less of the Black population than the White population, evidence exists that the White percentage of the district increased from the Pre 2020 to Adopted 2021 Plans. To accomplish this

a) The majority Black District 5 removes a population that is 16.10% Black while District 5's population of the Pre 2020 Plan is 14.70% Black. The result is a decrease in the Black percentage and an increase in the White percentage in District 5 of the Adopted Plan.

IX. The Illustrative Plan

A. Introduction

93. In order to demonstrate that an acceptable plan could be developed without race predominating, I generated an Illustrative Plan that modifies the Pre 2020 Plan and brings the plan within the acceptable population deviation. Because plaintiffs allege that keeping political subdivisions whole is the most frequently cited traditional districting principle by the Supreme Court, one of the central objectives of the Illustrative Plan was to reduce the number of municipalities split.

94. Although minimizing municipality splits was an objective, other traditional redistricting criteria were measured and compared with the Pre 2020 Plan and Adopted 2021 Plan. These

included the criteria of equal population, contiguity, minimizing splits of precincts or VTDs, and compactness (See Appendix C).

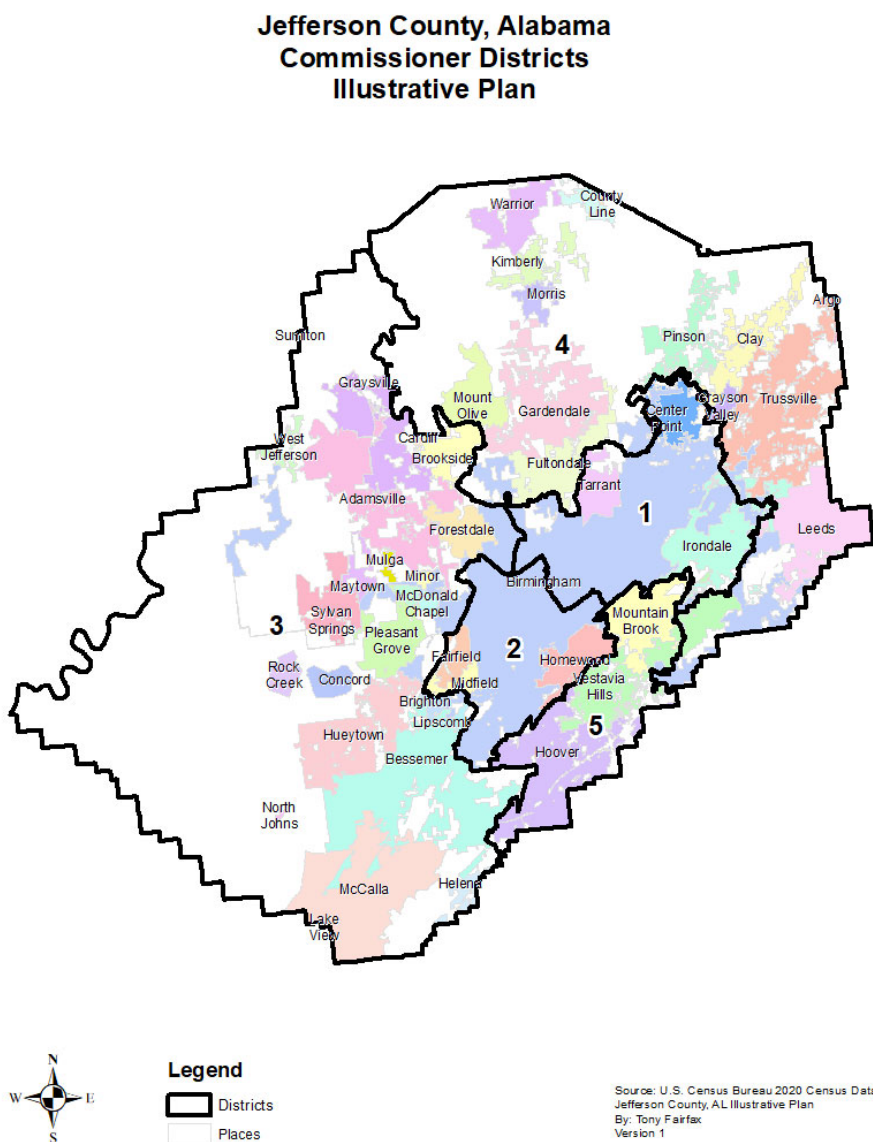


Figure 10 – The Illustrative Plan w/Census Places

B. Criteria: Equal Population as far as possible (One-Person, One Vote)

95. The Illustrative Plan has an overall population deviation of 1.05% (See Table 9), while the Adopted 2021 Plan has an overall population deviation of 1.72%. The equal population analysis shows that both plans were within the acceptable overall population deviation of 10%.

Table 12 – Jefferson County, AL Illustrative Plan’s Population Deviation 2020 Census

District	Population	Ideal Population	Deviation	% Deviation
1	134,723	134,944	-221	-0.16%
2	134,272	134,944	-672	-0.50%
3	135,048	134,944	104	0.08%
4	135,688	134,944	744	0.55%
5	134,990	134,944	46	0.03%
Overall Plan			1,416	1.05%

Source: Maptitude for Redistricting Population Illustrative Plan Summary Report Using 2020 Census Data

C. Criteria: Contiguity

96. The Pre 2020, Adopted 2021, and Illustrative Plans were found to be contiguous.

D. Criteria: Minimize Political Subdivisions (Municipalities)

97. The Pre 2020 Plan split twenty-two census places, the Adopted 2021 Plan split twenty-five, and the Illustrative Plan split four. The Illustrative Plan split the least census places.

E. Criteria: Minimize Political Subdivisions (VTDs)

98. The Pre 2020 Plan splits one (1) VTD, while the Adopted 2021 Plans splits 52 and the Illustrative Plan splits 34.²⁵ Thus, the Illustrative Plan splits fewer VTDs than the Adopted Plan.

F. Criteria: Compactness

99. When analyzing the compactness, I used three different comparison methods. I compared the Illustrative and Pre 2020 plans using the mean and district-by-district methods (See Tables 13 and 14).

100. The Illustrative Plan performed better than the Pre 2020 and Adopted 2021 Plans comparing the means of the plans. The Illustrative Plan was more compact, using the Reock and Convex Hull measures. All of the plans performed equally when viewing the Polsby-Popper measure.

101. Comparing the plans using the district-by-district method, the Illustrative Plan performs better than the Pre 2020 Plan as well. The Illustrative Plan is more compact than the Pre 2020 Plan and Adopted 2021 Plans in three districts (Districts 1, 2, and 3). The Pre 2020 Plan is the most compact for District 5 and the Adopted 2021 Plan is the most compact for District 4. Thus, the Illustrative Plan performs the best in 3 out of 5 districts using the district-by-district method.

²⁵ Analyzing 2020 Precincts shows that the Pre 2020 Plan split 102 precincts, the Adopted 2021 Plan split 101, and the Illustrative Plan split 75. Using the 2023 Precincts, the Pre 2020 Plan split 104 precincts, the Adopted 2021 Plan split 103, and the Illustrative Plan split 78.

Table 13 – Jefferson County, AL Plan Comparison Compactness Measures of Means

Plan	Reock Mean	Polsby-Popper Mean	Convex Hull Mean
Pre 2020	0.32	0.19	0.70
Illustrative	0.43	0.19	0.72
Adopted 2021	0.33	0.19	0.60
Best	Illustrative	Pre 2020 Illustrative Adopted	Illustrative

Source: Jefferson County Pre 2020, Illustrative, Adopted Plans data from Maptitude Compactness Reports

Table 14 – Jefferson County, AL Plan Compactness Measures District-by-District

	Pre 2020			Illustrative			Adopted 2021			
	R	P-P	CH	R	P-P	CH	R	P-P	CH	Best
1	0.27	0.13	0.57	0.51	0.15	0.71	0.28	0.12	0.58	Illustrative
2	0.26	0.21	0.68	0.52	0.27	0.76	0.28	0.22	0.75	Illustrative
3	0.41	0.20	0.73	0.46	0.23	0.78	0.39	0.18	0.72	Illustrative
4	0.43	0.19	0.73	0.45	0.15	0.68	0.48	0.20	0.73	Adopted
5	0.24	0.23	0.74	0.22	0.14	0.69	0.23	0.21	0.72	Pre 2020

Note: R – Reock, P-P – Polsby-Popper, CH – Convex Hull

Source: Jefferson County Pre 2020 and Illustrative Plan data from Maptitude for Redistricting Compactness Report

Considering the mean and the district by districts method, the Illustrative Plan performs the best out of the three plans. The Illustrative Plan performs better in two of three measures when comparing the mean and three of five districts when comparing district-by-districts.

G. Redistricting Criteria Comparison

102. When comparing the Illustrative Plan to the Pre 2020 and Adopted 2021 Plans using traditional redistricting criteria, the Illustrative Plan performs the best overall. The Illustrative

Plan performs better than the Adopted 2021 Plan for the criteria of census place splits, VTD splits, and compactness (See Table 15). When compared to the Pre 2020 Plan for the following criteria: census place splits and compactness, the Illustrative Plan also performs better. The Plans performed the same evaluating contiguity and equal population (within an acceptable range). Reviewing split VTDs, The Illustrative Plan performed better than the Adopted 2021 Plan but worse than the Pre 2020 Plan.

Table 15 – Pre 2020, Adopted 2021 Plan, and Illustrative Plans' Criteria Comparison

Criteria	Pre 2020 Plan	Illustrative Plan	Adopted Plan	Best Criteria
Contiguity	Y	Y	Y	Same
Equal Population	Y	Y	Y	Same
Political Subdivisions - Census Places	22	4	25	Illustrative
Political Subdivisions - VTDs	1	34	52	Pre 2020
Compactness - Plan Mean* - District by District (Pre 2020) - District by District (Illustrative) - District by District (Adopted)	.32,.19, .70 Dst 5 Dst 1,2,3 Dst 4	.43, .19, .72 Dst 5 Dst 1,2,3 Dst 4	.33,.19, .60 Dst 5 Dst 1,2,3 Dst 4	Illustrative

Source: Pre 2020, Adopted Plan, and Illustrative Plans extracted from Maptitude for Redistricting reports

*In order of Reock, Polsby-Popper, Convex Hull

X. Conclusions

103. The Black population in Jefferson County has grown such that it is now comprised of 42.91% of the county's total population, as of 2020. At the same time, the County's White population has decreased to make up less than 50% (48.06%) of the total population.
104. When looking at the County's voting age population. Jefferson County's BVAP increased from 2010 to 2020 and now stands at 41.46% of the total VAP. During this same period, the WVAP decreased significantly from 54.53% in 2010 to 50.42% in 2020.
105. The way the Adopted 2021 Plan shifts population from the Pre 2020 Plan appears to have a certain racial objective. However, there is no indication that these demographic shifts required these types of changes. The Illustrative Plan that I created provides evidence that these demographic oriented changes were not necessary. The proposed Illustrative Plan overall performs the same or better than the Adopted 2021 Plan on many of the criteria.
106. Instead, the shifting of population from the Pre 2020 Plan to the Adopted 2021 Plan is best explained as an attempt to add and remove populations according to their racial makeup. In fact, each district in the Adopted 2021 Plan shows evidence of race being used.
107. For example, District 1, with a population greater than 50% Black saw an increase in the Black population and a decrease in the White population. In addition, part of the increase in the Black population was due to the splitting of VTDs along racial lines. Specifically, East Pinson Valley Center VTD was split such that the portion added to District 1 was 86.18% Black, while the other portion was significantly lower at 56.91% Black.

108. Districts 3 and 4, with a Black percentage of slightly less than 30%, saw a decrease in Black percentage and an increase in White percentage from the Pre 2020 Plan to Adopted 2021 Plan. However, since these districts were overpopulated from the ideal population size, they required the removal of population. Hence, District 3 removed 9,114 Black persons while removing only 1,850 White persons. District 4 was even more extreme with the removal of 7,408 Black persons and an “increase” of 1,536 White persons.
109. Districts 3 and 4 also contained split VTDs that correlated with the decrease in Black percentage and increase in White percentage. District 3 removed more of the Black population than White in the split VTDs of Dolomite W Field Comm Ctr, Ross Bridge Welcome Ctr, and Bessemer Civic Ctr. District 4 removed more of the Black population than the White population in East Pinson Valley Ctr and Center Pt Comm Ctr VTDs.
110. Although Districts 2 and 5 did not follow the same pattern as the other three, there still exists evidence of race being used to construct the districts. District 2 adds the split VTDs of Ross Bridge Welcome Ctr and Bessemer Civic Ctr, with Black population added of 52.80% and 80.50%, respectively. Finally, the overpopulated District 5 removes a proportionately larger amount of the Black population than the White population. The net effect is that District 5 decreases in Black percentage and increases in White percentage from the Pre 2020 Plan to the Adopted 2021 Plan.
111. Consequently, every district contained within the Adopted 2021 Plan appears to be impacted demographically by the changes from the Pre 2020 Plan. Accordingly, the evidence

is clear that the movement of population from the Pre 2020 to the Adopted 2021 Plan relates to a pattern predominated by race.

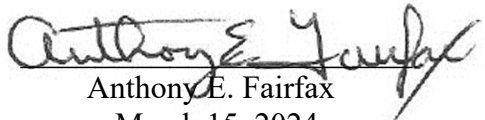
XI. Appendices

112. The following appendices are included with this report:

- Appendix A - Resume of Anthony E. Fairfax
- Appendix B - Maps of the Pre 2020, Adopted 2021, and Illustrative Plans
- Appendix C - Maptitude Reports of the Pre 2020, Adopted 2021, and Illustrative Plans
- Appendix D - Miscellaneous Maps
- Appendix E - District/VTD Changes & Core Constituencies Report

113. The findings and conclusions in this report are based upon information that has been made available to me or known by me to date. I reserve the right to modify, update, or supplement the report and analyses as additional information is made available to me.

Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct according to the best of my knowledge, information, and belief.


Anthony E. Fairfax
March 15, 2024